

2001/2002 Bobcat Carcass Inspection

Preliminary Results

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Background

During the 2001/2002 fur harvest season bobcat carcasses were collected from volunteering trappers and hunters in Nebraska. This carcass collection was conducted to investigate the reproductive status of female bobcats during the harvest season and to evaluate food composition.

Stomach Contents Analysis

The stomachs from 101 bobcats (mostly females) were removed and their contents inspected. Of these, 67 stomachs contained food and 34 were empty. Food items were identified based on hair, feathers and bone fragments. The following table lists food items encountered and their frequency of occurrence (empty stomachs not included):

Food Item	Frequency	% of Bobcats
Rabbits	51	76.1%
Small Rodents	15	22.4%
Birds	7	10.5%
Deer	5	7.5%

Rabbit was the food item most frequently encountered in this sample. In many cases prey had been swallowed in large chunks, often with the feet and ears intact (Figure 1).

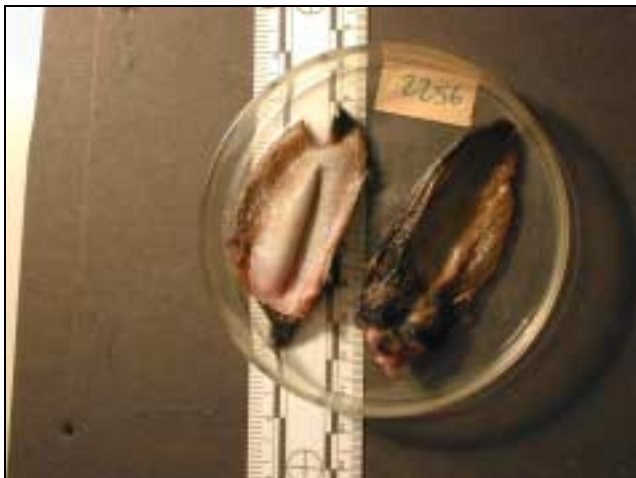


Figure 1: Rabbit ears retrieved from a bobcat stomach.

It is important to note that the overwhelming majority of stomachs came from bobcats that had been trapped and only a few animals in the sample where hunted or roadkill. The stomach contents from trapped animals is not only likely to be at a more advanced stage of digestion or autolysis but can also potentially contain bait used by the trapper instead of an actual prey item. However, follow-up phone calls to harvesters suggested that at least 5 of the 7 birds encountered in stomachs were not ingested in the form of bait but constituted prey taken by those bobcats prior to their capture.

Additional items found in stomachs were artificial objects such as trap pan covers and poly-fill (likely trap pan fill). Nearly half (48) of all stomachs inspected contained vegetation, in some cases a substantial amount of woody vegetation (occasionally mixed with soil). If a large amount of woody vegetation was found (Figure 2), it was likely to have been ingested by animals at a trap site after their capture.



Figure 2: Bobcat stomach with vegetative matter.

All but two bobcats used in this analysis were collected during winter; food composition may be different during other times of the year.

Eighty-four percent of all stomachs inspected contained roundworms, sometimes in large numbers.

Reproductive Analysis

Uteri and ovaries were removed from 100 bobcats. Uterine horns were split and placental scars counted. In addition, ovaries were inspected and the number of luteal bodies from previous and current reproductive cycles estimated.



Figure 3: Bobcat female reproductive tract. Uteri and ovaries have been cross-sectioned showing 4 placental scars (white arrow) and numerous corpora lutea (green arrow).

One of the objectives of this study was to determine if a season extension to the end of February would overlap with a period when dependant young are present.

Only one female showed clear signs of a current pregnancy. This was a roadkill animal collected on March 15 showing four distinct swellings on the uterus containing fetuses at an early stage of development (Figure 3).

Another roadkill animal (collected June 13) was nursing young. No other female in the sample showed signs of being in an advanced (at or past embryonic implantation) stage of the reproductive cycle.

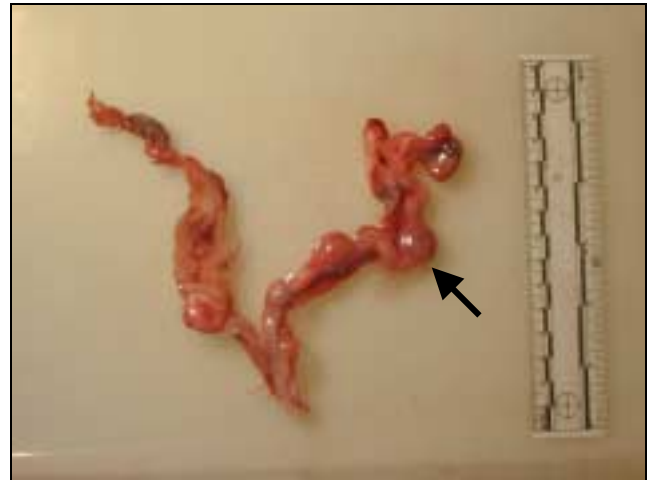


Figure 4: Uteri from pregnant bobcat with embryos (inside the bulges, arrow).

The uteri from at least 7 animals were enlarged, possibly because of estrus. Given a 60-70 day gestation period, the first young are not expected to be born until late March/early April. Likely, the majority of young are born much later.

Further analysis (mainly of placental scar data) and results are pending until the age of animals used in this survey has been determined. Skulls have been retained from all bobcats used in the reproductive analysis with the intention to remove teeth for aging via cementum annuli counts. Results from the age structure and reproductive history may be available in early 2003.

In addition, tissue samples for potential future genetic analysis have been collected from all animals used in this study. One such genetic study may look for a potential genetic dichotomy that may separate bobcat populations in the southern and central portions of the state from populations in the north and western regions.

I would like to thank those trappers and hunters that have made this investigation possible by submitting their bobcat carcasses. I would also like to thank all staff that have assisted with bobcat pelt tagging, carcass collection, and necropsies.